

CLAIMS

What is claimed is:

- 1 1. A system for allowing an application to be integrated with any one of a
2 plurality of distinct types of programmable platforms, the system
3 comprising:
 - 4 (a) a platform-independent application capable of being integrated with any one
5 of a plurality of distinct types of programmable platform;
 - 6 (b) a platform-independent interface capable of interfacing, at least in part, the
7 platform-independent application with any one of the distinct types of
8 programmable platforms; and
 - 9 (c) a platform-dependent interface situated on a predetermined programmable
10 platform and capable of serving in conjunction with the platform-
11 independent interface in interfacing the platform-independent application
12 with the predetermined programmable platform.
- 1 2. A system as recited in claim 1, wherein the platform-dependent interface is
2 specifically written to interface with the predetermined programmable platform.
- 1 3. A system as recited in claim 2, wherein the platform-dependent interface
2 includes a library of platform-dependent resource interfaces which are wrapped with
3 a standard interface capable of being accessed by the platform-independent
4 interface.
- 1 4. A system as recited in claim 1, wherein the platform-independent application
2 is specifically written to interface with the platform-independent interface.
- 1 5. A system as recited in claim 1, wherein the interface between the platform-
2 independent application and the programmable platform is capable of being
3 customized.

1 6. A system as recited in claim 5, wherein the interface is customized by
2 accommodating the specific port requirements of the platform-independent
3 application.

1 7. A system as recited in claim 5, wherein the interface is customized by
2 including and excluding peripherals based on the requirements of the platform-
3 independent application.

1 8. A system as recited in claim 5, wherein the interface is customized by
2 dedicating memory resources required by the platform-independent application.

1 9. A system as recited in claim 5, wherein the interface is capable of being
2 customized in accordance with user-specified criteria.

1 10. A system as recited in claim 9, wherein a graphical user interface is provided
2 for allowing a user to enter the user-specified criteria.

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1 11. A system as recited in claim 1, wherein a plurality of the applications are
2 included each with a unique platform-independent application utilizing a single
3 platform-independent interface including a plurality of plugs.

1 12. A system as recited in claim 11, wherein the platform-dependent interface of
2 the programmable platform includes a plurality of sockets allocated to the plugs.

1 13. A system as recited in claim 11, wherein the platform-dependent interface of
2 the programmable platform is capable of reserving resources for each of the
3 applications.

1 14. A system as recited in claim 1, wherein the programmable platform includes
2 a field programmable gate array (FPGA).

1 15. A system as recited in claim 1, wherein the platform-independent interface is
2 written in a C-based variant programming language.

1 16. A system comprising:
2 (a) a plurality of unique platform-independent applications;
3 (b) a platform-independent interface capable of interfacing, at least in part, the
4 platform-independent applications with any one of a plurality of distinct
5 types of programmable platforms; and
6 (c) a platform-dependent interface situated on a predetermined programmable
7 platform and capable of serving in conjunction with the platform-
8 independent interface in interfacing the platform-independent applications
9 and the predetermined programmable platform.

1 17. A method for allowing an application to be integrated with any one of a
2 plurality of distinct types of programmable platforms, the method
3 comprising:

- 4 (a) providing a platform-independent application capable of being integrated
- 5 with any one of a plurality of distinct types of programmable platform;
- 6 (b) interfacing the platform-independent application with any one of the distinct
- 7 types of programmable platforms utilizing a platform-independent interface
- 8 at least in part; and
- 9 (c) interfacing the platform-independent application with a predetermined
- 10 programmable platform utilizing a platform-dependent interface situated on
- 11 the predetermined programmable platform at least in part.

- 1 18. A computer program product for allowing an application to be integrated
- 2 with any one of a plurality of distinct types of programmable platforms, the
- 3 computer program product comprising:
- 4 (a) a platform-independent application capable of being integrated with any one
- 5 of a plurality of distinct types of programmable platform;
- 6 (b) platform-independent computer code for interfacing, at least in part, the
- 7 platform-independent application with any one of the distinct types of
- 8 programmable platforms; and
- 9 (c) platform-dependent interface computer code situated on a predetermined
- 10 programmable platform for interfacing, at least in part, the platform-
- 11 independent application with the predetermined programmable platform.

- 1 19. A system comprising:
- 2 (a) a platform-independent application capable of being integrated with any one
- 3 of a plurality of distinct types of programmable platform;
- 4 (b) a platform-independent interface capable of interfacing, at least in part, the
- 5 platform-independent application with any one of the distinct types of
- 6 programmable platforms; and
- 7 (c) a platform-dependent interface situated on a predetermined programmable
- 8 platform and capable of serving in conjunction with the platform-
- 9 independent interface in interfacing the platform-independent application
- 10 with the predetermined programmable platform;

- 11 (d) wherein the interface between the platform-independent application and the
12 predetermined programmable platform is capable of being customized in
13 accordance with user-specified criteria utilizing a graphical user interface for
14 allowing a user to enter the user-specified criteria.